

1           6.       The automated system of claim 3, further comprising a holding station for  
2 holding a plurality of reaction receptacles.

1           7.       The automated system of claim 2, wherein said separation station comprises  
2 magnetic elements for subjecting the contents of the reaction receptacle to a magnetic field  
3 during at least a portion of the separation procedure.

1           8.       The automated system of claim 2, wherein said separation station includes a fluid  
2 aspirator mechanism constructed and arranged to aspirate fluid sample from the reaction  
3 receptacle after isolating the solid support material.

1           9.       The automated system of claim 7, said separation station further comprising:  
2 a fluid dispense mechanism constructed and arranged to provide a wash buffer to the  
3 reaction receptacle after removing the fluid sample from the reaction receptacle; and  
4 a mixing device constructed and arranged to agitate the reaction receptacle to resuspend  
5 the solid support material after a wash buffer is provided by said fluid dispense mechanism.

1           10.      The automated system of claim 3, wherein the incubators of said amplifying  
2 incubation station are maintained at a temperature or temperatures different than the temperature  
3 or temperatures maintained by the incubators of said immobilizing incubation station.

1           11.      The automated system of claim 2, further comprising a hybridizing incubation  
2 station comprising one or more incubators, each said incubator of said hybridizing incubation  
3 station defining a temperature-controlled chamber constructed and arranged to receive the  
4 reaction receptacle and incubate the contents of the reaction receptacle, to which one or more  
5 probe reagents have been provided, for a period of time and under conditions sufficient to permit  
6 the probe to hybridize to the target sequence or an amplicon thereof.

1           12.      The automated system of claim 11, wherein said amplifying and hybridizing  
2 incubation stations are independent of one another or share at least one incubator in common.

1           13.     The automated system of claim 11, wherein said amplifying and hybridizing  
2 incubation stations are independent of one another.

1           14.     The automated system of claim 11, further comprising a detection station  
2 constructed and arranged to detect the presence or absence of the probe hybridized to the target  
3 sequence, or an amplicon thereof, as an indication of the presence or absence of an organism or  
4 one or more members of a group of organisms in the fluid sample.

1           15.     The automated system of claim 14, wherein said detection station comprises a  
2 luminometer constructed and arranged to detect the amount of light emitted by the contents of  
3 the reaction receptacle.

1           16.     The automated system of claim 2, further comprising a temperature ramping  
2 station constructed and arranged to raise or lower the temperature of the contents of the reaction  
3 receptacle prior to transporting the reaction receptacle to said amplifying incubation station.

1           17.     The automated system of claim 2, further comprising a fluid dispensing station  
2 constructed and arranged to dispense a fluid sample into the reaction receptacle.

1           18.     The automated system of claim 2, further comprising a deactivation station  
2 constructed and arranged to deactivate the nucleic acid contents of the reaction receptacle after  
3 permitting the target sequence to be amplified.

1           19.     The automated system of claim 14, further comprising a deactivation station  
2 constructed and arranged to deactivate the nucleic acid contents of the reaction receptacle after  
3 permitting the target sequence to be amplified.

1           20.     The automated system of claim 3, further comprising a hybridizing incubation  
2 station comprising one or more incubators, each said incubator of said hybridizing incubation  
3 station defining a temperature-controlled chamber constructed and arranged to receive the  
4 reaction receptacle and incubate the contents of the reaction receptacle, to which one or more

5 probe reagents have been provided, for a period of time and under conditions sufficient to permit  
6 the probe to hybridize to the target sequence or an amplicon thereof.

1 21. The automated system of claim 20, further comprising a detection station  
2 constructed and arranged to detect the presence or absence of the probe hybridized to the target  
3 sequence, or an amplicon thereof, as an indication of the presence or absence of an organism or  
4 one or more members of a group of organisms in the fluid sample.

1 22. The automated system of claim 21, further comprising a deactivation station  
2 constructed and arranged to deactivate the nucleic acid contents of the reaction receptacle after  
3 permitting the target sequence to be amplified.